

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of

PIRES, M.

Atty. Ref.: 35-226

Serial No. unknown

Group:

Filed: December 19, 2001

Examiner:

For: CREAMY, MILK-FREE O/W EMULSION, PROCESS FOR ITS PREPARATION  
AND ITS USE

\* \* \* \* \*

December 19, 2001

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

**PRELIMINARY AMENDMENT**

In order to place the above-identified application in better condition for  
examination, please amend the application as follows:

**IN THE CLAIMS**

Please substitute the following amended claims for corresponding claims  
previously presented. A copy of the amended claims showing current revisions is  
attached.

3. O/w emulsion according to claim 1, wherein the water-soluble carbohydrate is selected from glucose, fructose, saccharose, glucose syrup, dried glucose syrup, fructose syrup, maltodextrins and/or oligofructoses.

4. O/w emulsion according to claim 1, wherein the proportion of hydrocolloid is 0.1 to 3 wt.-% (relative to the whole emulsion).

5. O/w emulsion according to claim 1, wherein the hydrocolloid is selected from guar, locust bean gum, xanthane, pectin, carrageenan, alginates, carboxymethylcellulose, hydroxypropylmethylcellulose, microcrystalline cellulose and/or inulin.

6. O/w emulsion according to claim 1, containing a hydrocolloid-stabilizing system comprising hydroxypropylmethylcellulose, microcrystalline cellulose and guar in a weight ratio of 1 : 0.5 to 0.75 : 0.1 to 0.3.

7. O/w emulsion according to claim 1, optionally containing acidulant as further hydrophilic constituent.

8. O/w emulsion according to claim 1, wherein the acidulant is selected from lactic acid, citric acid, tartaric acid and/or malic acid and the proportion of acidulant is 0.001 to 0.1 wt.-% (relative to the whole emulsion).

9. O/w emulsion according to claim 1, wherein the proportion of edible oil and/or edible fat is 10 to 40 wt.-% (relative to the whole emulsion).
10. O/w emulsion according to claim 1, wherein the edible oil and/or edible fat is selected from palm oil, palm-kernel oil, sunflower oil, soya oil, rape-seed oil, coconut oil and/or technologically modified derivatives of the same.
11. O/w emulsion according to claim 1, wherein the proportion of emulsifier is 0.1 to 5 wt.-% (relative to the whole emulsion).
12. O/w emulsion according to claim 1, wherein the emulsifier is selected from mono- and diglycerides of the edible fatty acids, polysorbates, sorbitan esters of edible fatty acids, sodium stearyl lactylates, mono- and diglycerides of edible fatty acids esterified with lactic acid (LACTEM), acetic acid (ACETEM) or diacetyltartartic acid (DATEM), polyglycerine esters of edible fatty acids and/or lecithins.
13. O/w emulsion according to claim 1, containing an emulsifier system comprising sodium stearyl lactylates, polyoxyethylene 60 sorbitanmonostearate and mono- and diglycerides of the edible fatty acids in a weight ratio of 1 to 0.5 to 0.7 : 0.3 to 0.5.

14. O/w emulsion according to claim 1, being storage-stable in a pH range of 2.5 to 7.5 and being whippable with an accompanying increase in volume of at least 200 %.

15. O/w emulsion according to claim 1, being mixed as an already-developed emulsion with acidulant, food product selected from acid, neutral and/or alcohol-containing food product or mixtures of two or more of the same.

17. O/w emulsion according to claim 15, wherein the acid, neutral and/or alcohol-containing food product is selected from fruits, fruit preparations, fruit syrups, fruit juices, sour milk products, yoghurt products, chocolate preparations, vanilla preparations and/or liqueurs and the weight ratio of emulsion to acid, neutral and/or alcoholic food product is between 99 : 1 and 60 : 40.

18. Process for the preparation of a creamy, milk-free o/w emulsion as defined in claim 1, wherein

- a) edible oil and/or edible fat is heated to a temperature above its melting point and the lipophilic constituents are mixed with the heated edible oil and/or edible fat,
- b) water is heated separately and the hydrophilic constituents are mixed with the heated water,
- c) the oil phase is dispersed into the water phase,

- d) the obtained pre-emulsion is heat-treated (pasteurized, ultra-heat-treated or sterilized),
- e) the pre-emulsion is cooled to a temperature below 100°C,
- f) the pre-emulsion is homogenized under a pressure of 50 to 250 bar and
- g) the obtained oil-in-water emulsion is cooled and packed.

19. Process according to claim 18 for the preparation of a creamy, milk-free o/w emulsion as defined, wherein the emulsion from stage g) is mixed in a further step h) with acidulant, food product selected from acid, neutral and/or alcohol-containing food products or mixtures of two or more of the same.

20. Use of the creamy, milk-free o/w emulsion as defined in claim 1 or prepared as cream substitute for the preparation of cake and pastry and dessert products.

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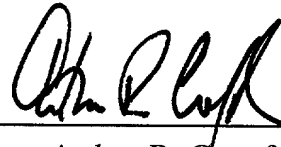
**REMARKS**

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page(s) is captioned "**Version With Markings To Show Changes Made.**"

Respectfully submitted,

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS**

3. O/w emulsion according to ~~one of claims 1 and 2~~, wherein the water-soluble carbohydrate is selected from glucose, fructose, saccharose, glucose syrup, dried glucose syrup, fructose syrup, maltodextrins and/or oligofructoses.
4. O/w emulsion according to ~~one of the previous claims 1~~, wherein the proportion of hydrocolloid is 0.1 to 3 wt.-% (relative to the whole emulsion).
5. O/w emulsion according to ~~one of the previous claims 1~~, wherein the hydrocolloid is selected from guar, locust bean gum, xanthane, pectin, carrageenan, alginates, carboxymethylcellulose, hydroxypropylmethylcellulose, microcrystalline cellulose and/or inulin.
6. O/w emulsion according to ~~one of the previous claims 1~~, containing a hydrocolloid-stabilizing system comprising hydroxypropylmethylcellulose, microcrystalline cellulose and guar in a weight ratio of 1 : 0.5 to 0.75 : 0.1 to 0.3.
7. O/w emulsion according to ~~one of the previous claims 1~~, optionally containing acidulant as further hydrophilic constituent.

8. O/w emulsion according to ~~one of the previous claims~~ 1, wherein the acidulant is selected from lactic acid, citric acid, tartaric acid and/or malic acid and the proportion of acidulant is 0.001 to 0.1 wt.-% (relative to the whole emulsion).

9. O/w emulsion according to ~~one of the previous claims~~ 1, wherein the proportion of edible oil and/or edible fat is 10 to 40 wt.-% (relative to the whole emulsion).

10. O/w emulsion according to ~~one of the previous claims~~ 1, wherein the edible oil and/or edible fat is selected from palm oil, palm-kernel oil, sunflower oil, soya oil, rape-seed oil, coconut oil and/or technologically modified derivatives of the same.

11. O/w emulsion according to ~~one of the previous claims~~ 1, wherein the proportion of emulsifier is 0.1 to 5 wt.-% (relative to the whole emulsion).

12. O/w emulsion according to ~~one of the previous claims~~ 1, wherein the emulsifier is selected from mono- and diglycerides of the edible fatty acids, polysorbates, sorbitan esters of edible fatty acids, sodium stearyl lactylates, mono- and diglycerides of edible fatty acids esterified with lactic acid (LACTEM), acetic acid (ACETEM) or diacetyltartartaric acid (DATEM), polyglycerine esters of edible fatty acids and/or lecithins.



13. O/w emulsion according to ~~one of the previous claims~~ 1, containing an emulsifier system comprising sodium stearoyl lactylates, polyoxyethylene 60 sorbitanmonostearate and mono- and diglycerides of the edible fatty acids in a weight ratio of 1 to 0.5 to 0.7 : 0.3 to 0.5.

14. O/w emulsion according to ~~one of the previous claims~~ 1, being storage-stable in a pH range of 2.5 to 7.5 and being whippable with an accompanying increase in volume of at least 200 %.

15. O/w emulsion according to ~~one of the previous claims~~ 1, being mixed as an already-developed emulsion with acidulant, food product selected from acid, neutral and/or alcohol-containing food product or mixtures of two or more of the same.

17. O/w emulsion according to claim ~~15 or 16~~, wherein the acid, neutral and/or alcohol-containing food product is selected from fruits, fruit preparations, fruit syrups, fruit juices, sour milk products, yoghurt products, chocolate preparations, vanilla preparations and/or liqueurs and the weight ratio of emulsion to acid, neutral and/or alcoholic food product is between 99 : 1 and 60 : 40.

18. Process for the preparation of a creamy, milk-free o/w emulsion as defined in ~~one of claims 1 to 14~~, wherein

- a) edible oil and/or edible fat is heated to a temperature above its melting point and the lipophilic constituents are mixed with the heated edible oil and/or edible fat,
- b) water is heated separately and the hydrophilic constituents are mixed with the heated water,
- c) the oil phase is dispersed into the water phase,
- d) the obtained pre-emulsion is heat-treated (pasteurized, ultra-heat-treated or sterilized),
- e) the pre-emulsion is cooled to a temperature below 100°C,
- f) the pre-emulsion is homogenized under a pressure of 50 to 250 bar and
- g) the obtained oil-in-water emulsion is cooled and packed.

19. Process according to claim 18 for the preparation of a creamy, milk-free o/w emulsion as defined in one of claims 15 to 17, wherein the emulsion from stage g) is mixed in a further step h) with acidulant, food product selected from acid, neutral and/or alcohol-containing food products or mixtures of two or more of the same.

20. Use of the creamy, milk-free o/w emulsion as defined in one of claims 1 to 17 or prepared as defined in claim 18 or 19 as cream substitute for the preparation of cake and pastry and dessert products.